

## AIR QUALITY PERMIT

Issued To:	Devon Louisiana Corporation	Permit: #2924-05
	Hill County #3 Compressor Station	Administrative Amendment (AA)
	P.O. Box 2606	Request Received: 08/23/04
	Clear Creek Road	Department's Decision on AA: 12/01/04
	Havre, MT 59501	Permit Final: 12/17/04
		AFS #: 041-0005

An air quality permit, with conditions, is hereby granted to Devon Louisiana Corporation (Devon), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

### SECTION I: Permitted Facilities

#### A. Plant Location

Devon owns and operates a natural gas compressor station located in the SE¼ of the SE¼ of Section 15, Township 30 North, Range 15 East, in Hill County, Montana. The facility is known as the Hill County #3 Compressor Station (also known as the Boyce-Nystrom Compressor Station). A complete list of the permitted equipment is contained in Section I.A of the Permit Analysis.

#### B. Current Permit Action

On August 23, 2004, the Montana Department of Environmental Quality – Air Resources Management Bureau (Department) received a request to change the corporate name on Permit #2924-04 from Devon Energy Corporation - Havre Pipeline Company, LLC (HPC) to Devon. The current permit action changes the corporate name on Permit #2924-04. Permit #2924-05 replaces Permit #2924-04.

### SECTION II. Conditions and Limitations

#### A. Emission Limitations

1. Devon shall not operate more than two compressor engines at any given time (ARM 17.8.749).
2. The maximum rated design capacity of compressor engine #01 shall not exceed 1,478-horsepower (hp) (ARM 17.8.749).
3. Compressor engine #01 shall be a rich-burn engine fitted with a non-selective catalytic reduction (NSCR) unit and an electronic air-to-fuel ratio (AFR) controller. Emissions from compressor engine #01 shall not exceed the pound per hour (lb/hr) emission limits as calculated using the following equation and the pollutant specific gram per brake horsepower-hour (g/bhp-hr) emission factors (ARM 17.8.752).

#### Emission Limit Equation:

$$\text{lb/hr} = \text{emission factor (g/bhp-hr)} * \text{maximum rated design capacity of engine (bhp)} * 0.002205 \text{ lb/g}$$

Emission Factors:

Oxides of Nitrogen (NO<sub>x</sub>): 2.0 g/bhp-hr  
Carbon Monoxide (CO): 3.0 g/bhp-hr  
Volatile Organic Compounds (VOC): 1.0 g/bhp-hr

4. The maximum rated design capacity of compressor engine #02 shall not exceed 625-hp (ARM 17.8.749).
5. Compressor engine #02 shall be a rich-burn engine fitted with an NSCR unit and an electronic AFR controller. Emissions from compressor engine #02 shall not exceed the lb/hr emission limits as calculated using the following equation and the pollutant specific g/bhp-hr emission factors (ARM 17.8.752).

Emission Limit Equation:

lb/hr = emission factor (g/bhp-hr) \* maximum rated design capacity of engine (bhp) \*  
0.002205 lb/g

Emission Factors:

NO<sub>x</sub>: 1.0 g/bhp-hr  
CO: 1.0 g/bhp-hr  
VOC: 1.0 g/bhp-hr

6. Devon shall operate all equipment to provide the maximum air pollution control for which it was designed (ARM 17.8.752).
7. Devon shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
8. Devon shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
9. Devon shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.8 (ARM 17.8.749).

B. Testing Requirements

1. Devon shall test compressor engine #01 for NO<sub>x</sub> and CO concurrently to demonstrate compliance with the NO<sub>x</sub> and CO emission limits as calculated in Section II.A.3. The testing shall occur on an every 4-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749). As of the date of Permit #2924-05, the last test was performed on March 29, 2001.
2. Compressor engine #02 shall be initially tested for NO<sub>x</sub> and CO concurrently to demonstrate compliance with the emission limits as calculated in Section II.A.5. The initial source testing shall be conducted within 180 days of the initial start up date of

the compressor engine. After the initial source test, additional testing shall continue on an every-4-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).

3. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
4. The Department may require further testing (ARM 17.8.105).

#### C. Operational Reporting Requirements

1. Devon shall supply the Department with annual production information for all emission points, as required by the Department in the annual Emission Inventory request. The request will include, but is not limited to, all sources of emissions identified in the Emission Inventory contained in the Permit Analysis. Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the Emission Inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).
2. Devon shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by Devon as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

#### D. Notification

1. Devon shall provide the Department with written notification of the actual installation date of compressor engine #02 within 30 days after the actual installation date.
2. Devon shall provide the Department with written notification of the actual start-up date of compressor engine #02 within 15 days after the actual start-up date.

### SECTION III: General Conditions

- A. Inspection – Devon shall allow the Department’s representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if Devon fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Devon of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department’s decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board the Department’s decision on the application is final 16 days after the Department’s decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the Air Quality Permit shall be made available for inspection by the Department at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Devon may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Permit Analysis  
Devon Louisiana Corporation  
Hill County #3 Compressor Station  
Permit #2924-05

I. Introduction/Process Description

Devon Louisiana Corporation (Devon) owns and operates the Hill County #3 Compressor Station. The facility is located in the SE¼ of the SE¼ of Section 15, Township 30 North, Range 15 East, of Hill County, Montana. The facility is located approximately 14 miles southwest of Havre on three fenced, rural acres.

A. Permitted Equipment

The facility consists of the following equipment:

- (1) 1,478-horsepower (hp) Waukesha L7042 GSI natural gas compressor engine (compressor engine #01);
- (1) 625-hp Caterpillar G398 TA natural gas compressor engine (compressor engine #02);
- (2) 500-gallon fixed-roof tanks (for oily water);
- (4) 500-gallon storage tanks (for antifreeze and lube oil);
- (1) PESCO TEG Dehydrating Unit (reboiler and still vent); and
- Scrubbers, headers, meters and other insignificant emitting units.

B. Source Description

The Hill County #3 Compressor Station gathers, compresses, and dehydrates nearby field gas. The compressor engines are used to gather and compress the gas and the dehydration unit removes moisture from the gas prior to transmission through the pipeline.

C. Permit History

On March 13, 1996, the Department of Environmental Quality (Department) received a complete Montana Air Quality Permit Application from Havre Pipeline Company, LLC (HPC) requesting the installation and operation of the Boyce-Nystrom facility. Permit #2924-00 was issued final on June 19, 1996.

On June 3, 1999, the Department received notification that UMC Petroleum Corp had merged with Ocean Energy, Inc. The permit ownership was changed to reflect that the Havre Pipeline Co., LLC, Boyce-Nystrom Compressor Station (Hill County #3 Compressor Station) would operate as a subsidiary of Ocean Energy, Inc. The rule references were also updated. On June 27, 1999, Permit #2924-01 replaced Permit 2924-00.

In 1999 the U.S. Environmental Protection Agency (EPA) informed the Department that any condition in an Air Quality Preconstruction Permit would be considered a federally enforceable condition. However, there are certain state rules that were never intended to be federally enforceable. The Department notified all facilities holding preconstruction permits that they could request deletion of those conditions based on the Administrative Rules of Montana (ARM) 17.8.717 and ARM 17.8.315. Removing either of these conditions did not relieve the facility from complying with the rule upon which the permit condition was based. Removal only ensured that enforcement of that condition remained solely with the Department. The permit action removed the condition based on ARM 17.8.315 from HPC's permit. On April 13, 2000, Permit #2924-02 replaced permit 2924-01.

On September 28, 2000, the Department received a permit modification request from HPC. HPC requested that the Department update the permit with a complete list of on-site equipment. During a company conducted permit audit, it was discovered that a PESCO TEG Dehydration Unit had not been listed as a contributing source of emissions. The dehydration unit was installed in November of 1997, as a de minimis source prior to de minimis notification requirements. Because emissions from the PESCO TEG dehydrating unit were less than the de minimis threshold of 15 tons per year, the PESCO TEG Dehydration Unit was added to the permit according to the provisions of ARM 17.8.705(1)(r). On February 14, 2001, Permit **#2924-03** replaced Permit #2924-02.

On May 27, 2004, the Department received a Montana Air Quality Permit Application, from HPC, for the modification of Permit #2924-03. The application was deemed complete on July 2, 2004, upon HPC's submittal of a revised Montana Air Quality Permit Application, which included additional information that was requested by the Department. Specifically, HPC requested the following: 1) To add a 625- hp Caterpillar Compressor Engine; 2) To remove a 1,478-hp Waukesha Compressor Engine; and 3) To make emission offsets from the compressor engines a federally enforceable condition in the permit to enable HPC to potentially replace engines at the facility according to the provisions of ARM 17.8.745. The current permit action incorporates HPC's requests into the permit. The current permit action incorporates HPC's requests and the name change into the permit. Permit **#2924-04** replaced Permit #2924-03.

#### D. Current Permit Action

On August 23, 2004, the Department received a request to change the corporate name on Permit #2924-04 from HPC to Devon. The current permit action changes the corporate name on Permit #2924-04. Permit **#2924-05** replaces Permit #2924-04.

#### E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and Environmental Assessments, is included in the analysis associated with each change to the permit.

## II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the ARM and are available, upon request, from the Department. Upon request the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

#### A. ARM 17.8, Subchapter 1 – General Provisions, including but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Devon shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>

Devon must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter (PM). (2) Under this rule, Devon shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne PM.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere, PM caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere PM in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of 1 pound of sulfur per million British thermal units (MMBtu) fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. Devon will utilize pipeline quality natural gas in its fuel burning equipment, which will meet this limitation.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR 60.

The Hill County #3 Compressor Station is not an NSPS affected source because it does not meet the definition of a natural gas processing plant as defined in 40 CFR 60, Subpart KKK. In addition, 40 CFR 60, Subpart LLL is not applicable to the Hill County #3 Compressor Station because the facility does not utilize a sweetening unit to process sour gas.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR 63, shall comply with the requirements of 40 CFR 63, as listed below:

40 CFR 63, Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. Owners or operators of oil and natural gas production facilities, as defined and applied in 40 CFR Part 63, shall comply with the applicable provisions of 40 CFR Part 63, Subpart HH. In order for a natural gas production facility to be subject to 40 CFR Part 63, Subpart HH requirements, certain criteria must be met. First, the facility must be a major source of hazardous air pollutants (HAPs) as determined according to paragraphs (a)(1)(i) through (a)(1)(iii) of 40 CFR 63, Subpart HH. Second, a facility that is determined to be major for HAPs must also either process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer, or process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. Third, the facility must also contain an affected source as specified in paragraphs (b)(1) through (b)(4) of 40 CFR Part 63, Subpart HH. Finally, if the first three criteria are met, and the exemptions contained in paragraphs (e)(1) and (e)(2) of 40 CFR Part 63, Subpart HH do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HH. Based on the information submitted by Devon, the Hill County #3 facility is not subject to the provisions of 40 CFR Part 63, Subpart HH because the facility is not a major source of HAPs.



40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Owners or operators of natural gas transmission or storage facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HHH. In order for a natural gas transmission and storage facility to be subject to 40 CFR Part 63, Subpart HHH requirements, certain criteria must be met. First, the facility must transport or store natural gas prior to the gas entering the pipeline to a local distribution company or to a final end user if there is no local distribution company. Second, the facility must be a major source of HAPs as determined using the maximum natural gas throughput as calculated in either paragraphs (a)(1) and (a)(2) or paragraphs (a)(2) and (a)(3) of 40 CFR Part 63, Subpart HHH. Third, a facility must contain an affected source (glycol dehydration unit) as defined in paragraph (b) of 40 CFR Part 63, Subpart HHH. Finally, if the first three criteria are met, and the exemptions contained in paragraph (f) of 40 CFR Part 63, Subpart HHH, do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HHH. Based on the information submitted by Devon, the Hill County #3 facility is not subject to the provisions of 40 CFR 63, Subpart HHH because the facility is not a major source of HAPs.

40 CFR 63, Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. Owners or operators of facilities that utilize reciprocating internal combustion engines and that are a major source of HAPs, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart ZZZZ. In order for a facility that utilizes a reciprocating internal combustion engine to be subject to 40 CFR Part 63, Subpart ZZZZ requirements, certain criteria must be met. The reciprocating internal combustion engines must have a maximum rated design capacity greater than 500-hp and the facility must be a major source of HAPs. Based on the information submitted by Devon, the Hill County #3 facility is not subject to the provisions of 40 CFR 63, Subpart ZZZZ because, although the facility utilizes two reciprocating internal combustion engines with a maximum rated design capacity greater than 500-hp, the facility is not a major source of HAPs.

D. ARM 17.8, Subchapter 4 – Stack Height and Dispersion Techniques, including, but not limited to:

1. ARM 17.8.401 Definitions. This rule includes a list of definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.402 Requirements. Devon must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP). The height stack for Devon is below the allowable 65-meter GEP stack height.

E. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an Air Quality Permit Application Fee concurrent with the submittal of an Air Quality Permit Application. A permit application is incomplete until the proper application fee is paid to the Department. Devon submitted the appropriate permit application fee for the current permit action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual Air Quality Operation Fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an Air Quality Permit (excluding an Open Burning Permit) issued by the Department. The Air Quality Operation Fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An Air Quality Operation Fee is separate and distinct from an Air Quality Permit Application Fee. The annual assessment and collection of the Air Quality Operation Fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an Air Quality Operation Fee on a calendar-year basis, including provisions that prorate the required fee amount.

F. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an Air Quality Permit or permit alteration to construct, alter or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. The Hill County #3 Compressor Station has a PTE greater than 25 tons per year of oxides of nitrogen (NO<sub>x</sub>) and carbon monoxide (CO); therefore, an Air Quality Permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration or use of a source. Devon was not required to submit a permit application because the current permit action is considered an Administrative Amendment. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Devon was not required to submit a permit application because the current permit action is considered an Administrative Amendment. Therefore, publication was not required.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this Permit Analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
  9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Devon of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
  10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an Environmental Impact Statement.
  11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
  12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
  13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
  14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.
- G. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
  2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

H. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
  - a. PTE > 100 tons per year of any pollutant;
  - b. PTE > 10 tons per year of any one HAP, PTE > 25 tons per year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
  - c. PTE > 70 tons per year of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) in a serious PM<sub>10</sub> nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #2924-05 for Devon, the following conclusions were made.
  - a. The facility's PTE is less than 100 tons per year for any pollutant.
  - b. The facility's PTE is less than 10 tons per year for any one HAP and less than 25 tons per year for all HAPs.
  - c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
  - d. This facility is not subject to any current NSPS.
  - e. This facility is not subject to any current NESHAP standards.
  - f. This source is not a Title IV affected source, nor a solid waste combustion unit.
  - g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that the Hill County #3 Compressor Station will be a minor source of emissions as defined under Title V.

III. BACT Determination

A BACT determination is required for each new or altered source. Devon shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT determination was not required for the current permit action because the current permit action is considered an Administrative Amendment.

#### IV. Emission Inventory

Source	Ton/year				
	PM <sub>10</sub>	NO <sub>x</sub>	CO	VOC	SO <sub>x</sub>
1,478-hp Waukesha Compressor Engine	0.48	28.56	42.84	14.28	0.04
625-hp Caterpillar Compressor Engine	0.02	6.04	6.04	6.04	0.00
0.5 MMBtu/hr PESCO TEG Glycol Dehydrator Reboiler	0.02	0.22	0.18	0.01	0.00
TEG PESCO Dehydrator Still Vent	0.00	0.00	0.00	4.69	0.00
Miscellaneous Fugitive VOC Sources	0.00	0.00	0.00	3.02	0.00
<b>Total</b>	<b>0.52</b>	<b>34.82</b>	<b>49.06</b>	<b>28.04</b>	<b>0.04</b>

##### 1,478-hp Compressor Engine

Brake Horsepower: 1478 bhp  
Hours of operation: 8760 hr/yr

##### PM<sub>10</sub> Emissions

Emission Factor: 9.50E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)  
Fuel Consumption: 11.53 MMBtu/hr (Maximum Design)  
Calculations: 11.53 MMBtu/hr \* 9.50E-03 lb/MMBtu = 0.11 lb/hr  
0.11 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.48 ton/yr

##### NO<sub>x</sub> Emissions

Emission factor: 2.00 gram/bhp-hour (BACT Determination)  
Calculations: 2.00 gram/bhp-hour \* 1478 bhp \* 0.002205 lb/gram = 6.52 lb/hr  
6.52 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 28.56 ton/yr

##### CO Emissions

Emission factor: 3.00 gram/bhp-hour (BACT Determination)  
Calculations: 3.00 gram/bhp-hour \* 1478 bhp \* 0.002205 lb/gram = 9.78 lb/hr  
9.78 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 42.84 ton/yr

##### VOC Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)  
Calculations: 1.00 gram/bhp-hour \* 1478 bhp \* 0.002205 lb/gram = 3.26 lb/hr  
3.26 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 14.28 ton/yr

##### SO<sub>x</sub> Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)  
Fuel Consumption: 11.53 MMBtu/hr (Maximum Design)  
Calculations: 11.53 MMBtu/hr \* 5.88E-04 lb/MMBtu = 0.01 lb/hr  
0.01 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.04 ton/yr

##### 625-hp Compressor Engine

Brake Horsepower: 625 bhp  
Hours of operation: 8760 hr/yr

##### PM<sub>10</sub> Emissions

Emission Factor: 9.50E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)  
Fuel Consumption: 0.50 MMBtu/hr (Maximum Design)  
Calculations: 0.50 MMBtu/hr \* 9.50E-03 lb/MMBtu = 0.005 lb/hr  
0.005 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.02 ton/yr

##### NO<sub>x</sub> Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)  
Calculations: 1.00 gram/bhp-hour \* 625 bhp \* 0.002205 lb/gram = 1.38 lb/hr  
1.38 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 6.04 ton/yr

#### CO Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)  
Calculations:  $1.00 \text{ gram/bhp-hour} * 625 \text{ bhp} * 0.002205 \text{ lb/gram} = 1.38 \text{ lb/hr}$   
 $1.38 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 6.04 \text{ ton/yr}$

#### VOC Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)  
Calculations:  $1.00 \text{ gram/bhp-hour} * 625 \text{ bhp} * 0.002205 \text{ lb/gram} = 1.38 \text{ lb/hr}$   
 $1.38 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 6.04 \text{ ton/yr}$

#### SO<sub>2</sub> Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)  
Fuel Consumption: 0.05 MMBtu/hr (Maximum Design)  
Calculations:  $0.05 \text{ MMBtu/hr} * 5.88\text{E-}04 \text{ lb/MMBtu} = 0.000003 \text{ lb/hr}$   
 $0.00003 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.00 \text{ ton/yr}$

#### **TEG PESCO Glycol Dehydrator Reboiler (0.5 MMBtu/hr)**

Boiler Heat Output: 0.5 MMBtu/hr  
Hours of Operation: 8760 hr/yr  
Fuel Heating Value: 0.001 MMscf/MMBtu  
Fuel Consumption:  $0.5 \text{ MMBtu/hr} * 0.001 \text{ MMscf/MMBtu} * 8760 \text{ hr/yr} = 4.38 \text{ MMscf/yr}$

#### PM<sub>10</sub> Emissions (All PM is assumed to be less than 1um)

Emission Factor: 7.6 lb/MMscf (AP-42 Chapter 1, Table 1.4-2, 03/98)  
Calculations:  $7.6 \text{ lb/MMscf} * 4.38 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.02 \text{ ton/yr}$

#### NO<sub>x</sub> Emissions

Emission Factor: 100 lb/MMscf (AP-42 Chapter 1, Table 1.4-2, 03/98)  
Calculations:  $100 \text{ lb/MMscf} * 4.38 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.22 \text{ ton/yr}$

#### CO Emissions

Emission Factor: 84 lb/MMscf (AP-42 Chapter 1, Table 1.4-2, 03/98)  
Calculations:  $84 \text{ lb/MMscf} * 4.38 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.18 \text{ ton/yr}$

#### VOC Emissions

Emission Factor: 5.5 lb/MMscf (AP-42 Chapter 1, Table 1.4-2, 03/98)  
Calculations:  $5.5 \text{ lb/MMscf} * 4.38 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.01 \text{ ton/yr}$

#### SO<sub>x</sub> Emissions

Emission Factor: 0.6 lb/MMscf (AP-42 Chapter 1, Table 1.4-2, 03/98)  
Calculations:  $0.6 \text{ lb/MMscf} * 4.38 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.00 \text{ ton/yr}$

#### TEG PESCO Dehydrator Still Vent

#### VOC Emissions

Emission Factor: 1.07 lb/hr (GRI-GLYcalc, EPA approved emission estimation program)  
Calculations:  $1.07 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 4.69 \text{ ton/yr}$

#### Hazardous Air Pollutant Emissions

Emission Factor: 0.50 lb/hr (GRI-GLYcalc, EPA approved emission estimation program)  
Calculations:  $0.50 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 2.19 \text{ ton/yr}$

#### Miscellaneous Fugitive VOC Sources

#### VOC Emissions

Emission Factor: 0.69 lb/hr (Permit Application #2924-00)  
Calculations:  $0.69 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 3.02 \text{ ton/yr}$

#### Hazardous Air Pollutant Emissions

Emission Factor: 0.06lb/hr (Permit Application #2924-00)  
Calculations:  $0.06 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.26 \text{ ton/yr}$

## V. Existing Air Quality

The facility is located in the SE¼ of the SE¼ of Section 15, Township 30 North, Range 15 East, in Hill County, Montana. The air quality of this area is classified as either better than National Standards or unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for criteria pollutants.

## VI. Ambient Air Impact Analysis

The Department determined that there would be no impacts from this permitting action. The Department believes the facility will still not cause or contribute to a violation of any ambient air quality standard.

## VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

## VIII. Environmental Assessment

The current permit action is considered an Administrative Action and will not result in an increase of emissions from the facility. Therefore, an Environmental Assessment is not required.

Permit Analysis Prepared By: Carson Coate

Date: October 19, 2004